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ABSTRACT

This paper argues against teaching children to make letters using circle-stick writing. It contends that the circle-stick method requires continued pen/pencil lifts hindering rhythm or flow in the writing process and that there is little carry-over value into cursive writing as the two scripts are totally different. D'Nealian print, one type of continuous stroke print, is seen as advantageous because it is very legible, teaches a slanted print used in later cursive, develops a wholeness or gestalt of forming letters rather than splinter parts and makes allowances for individuality. In teaching of D'Nealian handwriting, emphasis is placed on size, shape, spacing, and slant, and lower case letters are taught first. Other important considerations in the teaching of handwriting include: paper and arm position for writing either right- or left-handed, line-width spacing for paper, lined versus unlined paper, copying versus tracing, pencil size, and pen/pencil grip. The paper concludes that circle-stick writing cannot be justified as an approach to the teaching of handwriting, as evidence supports continuous stroke manuscript print. (Contains 45 references.) (JDD)

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Paper presented at Council for Exceptional Children Annual Convention, San Antonio, TX, 1993 and re-presented with updated bibliography to Council for Exceptional Children, Michigan Chapter, March 2, 1995

by

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D'NEALIAN HANDWRITING VERSUS CIRCLE-STICK PRINT

The purpose of this paper is to present and organize an extensive body of information, from published books and materials, dealing with the most important aspects of teaching children the skill of legible handwriting. The need for gathering such information is necessary due to the revolutionary changes brought about by the continuous stroke printing developed in D'Nealian Handwriting.

Prior to D'Nealian Handwriting, children in American schools were taught to make their letters using splinter parts consisting of straight lines and circles. This method is often referred to as circle-stick writing. The matching together of arrow straight lines and circles requires continued pen/pencil lifts hindering rhythm or flow in the writing process. There is also little carry over value into cursive writing as the two scripts are totally different in make-up.

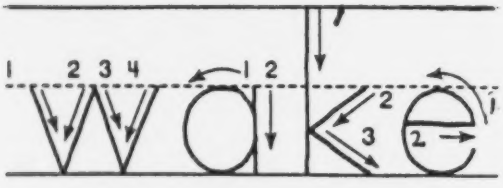
Traditionally circle-stick is taught in kindergarten and used to about the end of the second grade. In grade three it is dropped and a change is made to cursive writing. This method of operation represents a great waste of student and teacher time and effort which might well be spent on reading, spelling, grammar and story writing.

In contrast to circle-stick print, continuous stroke print letters are formed with one flowing movement except to cross letters t, x, and f and dot the i and j. This technique helps develop a rhythm for writing which is so necessary for later cursive penmanship. The process is built on a solid continuum from the start to finished cursive product. There is no learning and then unlearning such as is found in circle-stick writing.

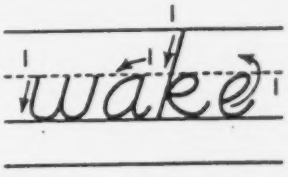
One of the better in-depth studies covering five decades of handwriting development is by Kimerer (1986). She recommends the segmented-stroke approach to teaching manuscript should be replaced with the continuous-stroke method.

The following example shows the stroke count to write

the word "wake" in typical circle-stick and in continuous stroke print. To write the lower case alphabet using circle-stick print 51 strokes are needed. With continuous stroke print only 31 strokes are used. In addition the illustration exhibits how easily the continuous stroke print will flow into cursive writing.



Circle-stick manuscript: eleven strokes needed.



D'Nealian® manuscript: four strokes needed.

Several other advantages of D'Nealian print over circle-stick letters are:

* It uses near normal sized print.
* It teaches a slanted print which is the usual right hand slant used in later cursive.
* It develops a wholeness or gestalt of forming letters rather than splinter parts.
* Allowances are made for individuality as no two people can write alike.

A brief look at the early development of circle-stick shows it began in England around the turn of the century. It was an effort to get away from the overly fancy Spencerian style of writing. As quickly as it started there was dissatisfaction with the process. Marie Montessori (1912), an Italian educator stated, "Yet it does not seem natural that to write the letters of the alphabet, which are all rounded, it should begin with straight lines and acute angles." "Is it necessary to begin writing with the making of verticle strokes? A moment of clear and logical thinking is enough to enable us to answer, no. The child makes too painful an effort in following such an exercise." English educators also felt that circle-stick was an undesireable script. Margorie Wise, who had introduced this script to American schools in the 1920's, also rejected its useage (Connell, 1983).

During this period as English students were struggling with circle-stick, Marion Richardson, a leading educator in England, was setting the stage for later continuous stroke printing. She observed the staccato movements of children writing circle-stick script and felt it would not lead naturally into cursive writing (Alston & Taylor, 1987). Her leadership with continuous stroke print has influenced many modern handwriting educators.

Presently in English speaking countries, there is a growing trend towards continuous stroke printing with over a half-dozen print scripts now in use (Sassoon, 1990; Smith and Inglis, 1981; Thurber, 1983; Gourdie, 1981; Barnard, 1981; Jordan, 1978). These handwriting authorities have incorporated vertical as well as slanted print in their pedagogics of writing. Children have no serious trouble writing this style of print regards reading development or letter recognition (Young, 1985).

In TEACHER: "Reading Review" (1978) it was reported, "The D'Nealian system features slightly modified lower case manuscript print letters that are crisp, neat, and legible. Modifications are so slight that they are completely familiar to anyone using any manuscript currently in use. If you have any qualms about teaching this system in your classroom rest assured that it is easy to teach."

Ouranda (1985) stated, "This researcher saw no confusion or problem in any of the subjects in the study distinguishing text book printing from their D'Nealian continuous stroke printing."

A recent and indepth study conducted in New Zealand schools including 119 schools and 3,738 pupils is one of the most intensified look at handwriting of modern time. Several writing styles were evaluated: Palmer, circle and stick, continuous stroke print, cursive and others. In the quality of work the continuous stroke,"basic print", completed the most legible work (Alston & Taylor, 1987).

Some Concepts of D'Nealian Handwriting

In the beginning stages of handwriting emphasis is put on lower case letters so that children can write words quickly. As a child learns a letter it is worked into a word. This helps the child understand that letters build words which can then be built into phrases, then simple sentences, and then writing as a mode of verbal expression.

Likewise at the start less concentration is put on capital letters as there are ten letters - c, j, o, p, s, u, v, w, x, and z - which are simply enlargements of the smaller letters. Children seem easily able to pick up other capital letters as they are developing their lower case skills.

In D'Nealian emphasis is put on legibility. This is established through achieving mastery of consistant letter formation by using proper and consistant size, shape, spacing, and slanting of all twenty-six lower case letters and capitals as they are learned. Size, shape, spacing, and slant are the four "s" words that will develop a learner into a legible hand writer.

One of the strong features of D'Nealian that helps develop legibility is the use of "up" ending strokes with letters: a, d, e, h, i, k, l, m, n, t, u, x, and the below-line "up" endings on letters g, j, q, and y. These serifs help establish proper spacing which is one of the main ingredients necessary for legible writing. Exit "up swing" strokes help to promote the flowing movement that develops into joins. This is in contrast with the stiff straight letters of print script that terminate abruptly on the baseline. With straight print letters maximum pressure is on the baseline; but with an exit stroke, the pencil pressure is relaxed as the upstroke changes direction and lifts towards the next letter (Sassoon, 1991).

It is important to mention that children should not be rushed through printing and into cursive writing (Kimerer, 1986). As with reading where all children do not learn to read at the exact same time, they do not master handwriting skills at the same time. With D'Nealian they learn the basic letter formations which later transfer easily into cursive script when they are

ready. The key to cursive readiness is when the learner has mastered all twenty-six lower case letters with one-hundred percent legibility and the capitals with at least 75% accuracy. Legibility is always defined as consistancy of letter slant, size, shape, and spacing (Anderson, 1969; Thurber, 1983; Stewig & Nordberg, 1995; Quant, 1946).

Paper & Arm Position for Writing either Right or Left-Handed

For left-handed beginning writing students, most every publisher and educator agree on paper placement. It should be slanted, top to the right, with the arm near parallel to the paper's side edges.

For right-handed students, publishers and educators disagree over paper position for printing. One group favors placing the paper with a vertical alignment to the side edges of the desk, placing the paper directly in the middle of the body with the nose in line with the middle of the paper (Zaner-Bloser, 1984). This placement could cause problems with midline crossover as half of the paper is not in the dominant visual area of the writer. Later when the learner is ready for cursive writing a different paper slant is called for. The paper is then slanted top edge to the left with the arm paralleling the paper's side edges. There appears to be no rationale for this paper position regarding cursive writing differing from the previously mentioned position for manuscript printing.

Gillingham and Stillman (1960) state, "an undesireable position for both right and left-handers is that of having the paper positioned so that its front edge is parallel with the desk. It is physiologically impossible to write at this angle with any power."

Another group of publishers and experts recommend that right-handed children slant their paper from the beginning the same for both print and cursive writing. The paper's top is slanted to the left with the paper towards the right side of the hand you write with, holding the arm parallel to the paper's side edges.

For both right and left-handed writers there is no absolute slant for the paper or arm because of variations with each person's physical, neurological, and visual differences. In the early developmental stages children by nature squirm and constantly move body positions. This can easily move their writing material out of proper vision and hand/arm placement.

The teacher during this time needs to give extra attention to proper paper position. As writing skills develop from laboriously stroking letters to the more automatic flow of writing letters, less attention to paper position will be needed (Thurber, 1983; Sassoon, 1990; Kahn, 1969; Wellman, 1983; Spaulding, 1969; Gourdie, 1964; Hagan, 1983; Anderson, 1988; Towle, 1978; Levy, 1976; King, 1976; Orton, 1937; Jordan, 1978; Smith, 1977).

Line-width Spacing for Paper

Large-spaced lines produce giant sized printed letters. When children are forced to make these outsized letters, they are not writing but in reality are drawing the letters.

Children have no trouble writing smaller sized letters. In kindergarten 3/4 inch lined paper works satisfactorily. For grade one formal writing, line spaces should be no larger than 1/2 inches and have a dotted or faintly marked midline (Spaulding, 1969; Monson, Taylor & Dykstra, 1988).

Lined versus Unlined Paper & Writing Readiness

From the age of scribbling, unlined paper is preferred by children learning to write their numbers and letters until formal handwriting training begins. Then lined paper is the choice of many educators (Groff, 1981; Lindsay, 1983; Smith, 1977; Burnhill, 1979).

Although some children may write in a legible fashion at age five, the majority do not until age six to seven (Petty, 1980). This falls within the grade one age span and is the time formal handwriting should be taught. Formal handwriting means daily time on task instruction with the objective to

produce legible communication. At this age children should be physically, mentally, and emotionally ready for such instruction (Masters, 1987; Laszlo & Bairstow, 1984).

Copying versus Tracing .

When children trace over something they are doing someone else's model and are not developing the visual, touch, and feeling senses necessary for handwriting skill learning. However when copying, this process requires perception, form comprehension, motor skills, and engages the learner's psyche more than tracing. The procedure for best accomplishing this is through the VKAT approach, engaging the Visual, Kinesthetic, Auditory, and Tactile senses (Furner, 1970; Thurber in Coon, 1993; Graham, 1980; Askor & Greff, 1975; Hirsch & Niedermeyer, 1972, 1973; Groff, 1981; Kirk, 1980).

Large Pencils

Broomstick sized pencils are out while standard sized pencils are in (Groff, 1981; Ziviani, 1981; Halpin, 1976). Most children begin scribbling and writing with the number two standard pencil usually found in all homes. Because of individual differences in physical development parents and teachers should have several sizes and shapes of pen/pencils for beginning writers. They will soon pick and use what feels most comfortable to their hand.

In a study of 525 Florida first graders there were no significant differences in legibility because of children using various sized writing tools (Lamme, 1981; Ayris, 1983).

Pen/Pencil Grip

Not all people should hold their pen/pencils in one prescribed position. Finger size, physical development, emotional feelings, and visual ability can all be influencing factors on how we grip the writing tool (Graham, 1980; Ziviani, 1986). Today the traditional three finger pressure hold is referred to as the dynamic tripod grip and dominates how we

hold our writing tool. It has been with us since the days of the quill and has no solid research to back its useage - only tradition. This grip however may not be the best way for everyone to hold a pencil (Tiedt, 1983; Sassoon, 1990). "It can cause blisters, callouses, muscle cramping, and even distort the bone structure in the end phalange of the fingers. For many people with arthritis of the hand, holding the pencil with this pincher grip can be extremely painful.

A new alternate grip offers relief from the aforementioned problems. This newly refined (D'Nealian) grip eliminates the pressure hold or the squeezing of the writing tool to hold it in place. The pencil is placed between the index and middle fingers, resting on the web of the hand. It is then grasped with the thumb, index, and middle fingers about an inch from the point. The thumb gently holds the pencil in place against the other two fingers. The hand rests on the heel of the hand and slides on the tips and nails of the fourth and fifth fingers. The pencil is held with about a twenty-five degree slant from the vertical position. This provides a firm structure that doesn't require much fingertip pressure to hold the writing instrument." (Thurber in Coon, 1993).

It is advised for lefties to hold their writing tool about 2-3 centimeters from the tip. This pushes the pen/pencil far enough from the finger tips so they can see what they are doing. This technique can help prevent the writer from writing with a sharply hooked hand position. Such hooking might lead to carpal tunnel problems in later life.

To summarize, the material in this study clearly indicates that circle-stick writing cannot be justified as a pedagogic.Recent changes are now sweeping away decades of illogical handwriting practices as abundant evidence now exists in support of continuous stroke manuscript print. The late Dr. Gerald Getman (1983), a pioneer in the field of developmental optometry, best summed up a new continuous stroke writing technique by stating, "Fortunately for thousands of children, the D'Nealian writing program has recently become available."

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